



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,947	04/12/2004	Rodney James Dry	T2211-9060US01	2353

181 7590 04/24/2006

MILES & STOCKBRIDGE PC  
1751 PINNACLE DRIVE  
SUITE 500  
MCLEAN, VA 22102-3833

EXAMINER

KASTLER, SCOTT R

ART UNIT PAPER NUMBER

1742

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/821,947

Applicant(s)

DRY ET AL.

Examiner

Scott Kastler

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

***Means-Plus-Function Terms in the Claims***

The instant claims contain the following means-plus-function terms:

1. “solids feed means” (claims 1 and 16) which is not in proper means plus function format since the claims includes structure for the recited means.
2. “gas injection means” (claims 1 and 16) defined by gas injection lance (26).
3. “gas delivery duct means” (claims 1 and 16) which is not in proper means plus function format since it includes structure (a duct) describing the means.
4. “offgas duct means” (claims 1 and 16) which is not in proper means plus function format since it includes structure (a duct) describing the means.
5. “metal tapping means” (claims 1 and 16) defined at page 18 of the specification for example.
6. “slag tapping means” (claims 1 and 16) defined at page 18 of the specification for example.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Dry’424, Burrow’417 and Burrow’016. each of Dry’424, and Burrow’016 teach a fixed smelting vessel including a solids feed means comprising a plurality of lane pairs, a gas injection means,

Art Unit: 1742

gas delivery duct means, offgas duct means, metal tapping means and slag tapping means (figures 1 and 2 of Dry'424 for example, and claims 1 and 1-13 of Burrow'016 for example) which meet all of the requirements of the above claims except the specifically recited solids material supply line configurations, although each of Dry'424 and Burrow'016 require some type of solids materials supply line configuration and the supply lines of each of Burrow'016 and Dry'424 operate in substantially the same manner with substantially the same effects as the instantly claimed supply lines. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because it has been well settled that where the applied prior art includes a claimed component (in the instant case solids material supply, or feed means or systems) which operates in substantially the same manner with substantially the same function as the claimed component (both the supply systems of the applied references and that of the instant claims operate to supply the solids injection lances with solid feed materials), then motivation to alter the shape or configuration of a component shown by the prior art without altering the component's function would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See MPEP 2144.04 IV A and B. In the instant case, absent any demonstrated new or unexpected result arising therefrom, motivation to alter the shape or configuration of the required supply or feed means of either of Dry'424 or Burrow'016 to any other equally useful shape or configuration would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Art Unit: 1742

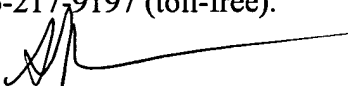
***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each of Dry'223, Dry et al, and Burrow'417 are also cited as further examples of prior art direct smelting plants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Scott Kastler  
Primary Examiner  
Art Unit 1742

sk